

Powerful qualities, not pure powers

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Abstract

I explore two accounts of properties within a dispositional essentialist (or causal powers) framework, the pure powers view and the powerful qualities view. I first attempt to clarify precisely what the pure powers view is, and then raise objections to it. I then present the powerful qualities view and, in order to avoid a common misconception, offer a restatement of it that I shall call the truthmaker view. I end by briefly defending the truthmaker view against objections.

1 Introduction

According to the neo-Humean metaphysic, defended most prominently by David Lewis,¹ the world is a vast collection of particular, local matters of fact—it’s just one little thing after another. Necessary connections between distinct existences are, on this view, anathema. “[A]nything can coexist with anything else... Likewise, anything can fail to coexist with anything else” (Lewis, 1986). The world is a sort of mosaic of facts, and the connections between them—nomic, causal or modal—supervene on the patterns in that mosaic. Properties, the colors of the mosaic, are purely qualitative. In themselves they are impotent, devoid of any intrinsic nomic, causal, or modal character. They get connected to other properties only by way of the laws of nature, which are themselves contingent patterns in the mosaic of qualities. Call the resulting view of properties categoricism.

To contemporary essentialists, the happenings in a neo-Humean world are radically contingent in a way that threatens to make the world wholly unintelligible. In such a world, events lack any genuine unity. It is tempting to identify categoricism about properties as the culprit. But what competing theory of properties does the essentialist have to offer? The available

¹See Lewis (1986), for example.

alternatives are surprisingly underdeveloped. Properties are, according to the essentialist, intrinsically powerful, packing their own nomic, causal and modal character. But this is far from an account of properties. What *are* properties?

I explore two accounts. The first is the pure powers view, defended by Alexander Bird and Stephen Mumford,² on which properties are powers and nothing but powers. The second view is the powerful qualities view, defended by C. B. Martin and John Heil,³ on which properties are *both* powerful and qualitative. Both views are, unfortunately, easily misunderstood. In section 2, I clarify the pure powers view, and raise worries for it. In section 3, I present the powerful qualities view. I then, in sections 4 and 5, offer a reformulation of the powerful qualities view, which I call the truthmaker view. Finally, in section 6 I briefly defend the truthmaker view against objections.

In what follows, I assume the typical distinction between an abundant and a sparse conception of properties, and interpret the essentialist theories of properties as theories of only the sparse properties. Following Lewis (1986), I shall call the abundant properties non-natural ones, and the sparse, natural.

I also assume a form of truthmaking theory, according to which truth is determined by reality. It posits a basic relation that is typically cross-categorical, relating objects to truth bearers. It is a many-many relation, so that one entity can make multiple truths true and one truth can have multiple truthmakers. If truth bearers are necessary existents, then the truthmaking relation is necessary in the sense that if some entity, *e*, is a truthmaker for some truth, *t*, *e* is a truthmaker for *t* in any world in which *e* exist. If, as I'm inclined to believe, truth bearers are contingent existents—concrete representings, say—then the relation is not necessary in that sense, but rather in the sense that it is an internal relation, determined by the natures of the relata: if *e* is a truthmaker for *t*, then in any world in which both *e* and *t* exist, *e* is a truthmaker for *t*. Finally, I assume a limited form of truthmaker maximalism, on which every truth regarding concrete objects and their properties has a truthmaker.

²See Bird (2007b) and Mumford (2004).

³See Martin (2008), Martin & Heil (1999), and Heil (2003).

2 The pure powers view

According to categoricism, properties are pure qualities. While these qualities play a causal role, their causal role is foisted on them by the laws of nature. The essentialist, in contrast, thinks that a property's causal role is essential to it. The pure powers view goes one step further: there is nothing to a property but its causal role. Properties are powers and *nothing but* powers. Instead of pure qualities, they are pure powers.

According to Mumford (2004), the “causal role exhausts a property in that there is nothing at all more to it than what it does, or its relations with other properties.” In other words, “the essence and identity of a property are determined by its relations to other properties. To be F is only to bear certain relations to all other properties, G, H, I, and so on.” Similarly, Bird (2007b) claims that “the identity of any property is determined by its relations to other properties.”

When the causal role of P is to bring about Q, or when P is a power or disposition whose manifestation is Q, let us say that P bears the relation R to Q. Let R, in other words, capture the relation between properties that Mumford and Bird are interested in. To be sure, Mumford thinks that several such relations determine the identity of properties, whereas Bird speaks of one. For our purposes, this difference is not significant. What is important is that they are *relations*. And so I shall simplify matters by speaking of just one relation. We might call it the manifestation relation, or the power relation. But note that it is the relation that holds between P and Q when Q is a *possible* manifestation of P, not when it is an *actual* manifestation of P. It is, therefore, an essentially modal relation.

What might it mean for R to determine the identity of a property? First, let us distinguish between two senses of “identity,” the external-profile sense and the what-it-is sense. When we inquire about the identity of a property in the what-it-is sense, we are not talking about something other than the property to which the property is somehow related. Rather, we are inquiring about the property itself, its ontological make-up. In the what-it-is sense, the identity of a property is that with which the property is identical. The external-profile sense of identity, in contrast, is *that by means of which a property can be identified* or uniquely picked out. It is something like a uniquely satisfied definite description. It is, and this is the important point, distinct from the property, something other than the property itself. It might be a conjunction of truths, a series of facts, or a collection of second-order properties that are uniquely true of or had by the property in question. Fix on those truths or facts or second-order properties, and you can be sure that

you've fixed on that property.

When Mumford and Bird claim that the identity of a property is determined by its relations to other properties, a tempting interpretation is this: the pure powers view is an account of the external profile of properties. According to this interpretation, the claim is that when we have specified all the manifestation relations that hold between properties, we have said all that needs to be said in order to pick out which properties there are and to distinguish one property from another.

This is to be contrasted with categoricism. Since the manifestation relations that hold between properties are contingent on that view, specifying the relations will not be sufficient to pick out the properties uniquely. Indeed, there simply is *no* external profile that would succeed in uniquely picking out a particular property always, everywhere and in all possible worlds, if categoricism is true.

While such an interpretation is tempting, it is mistaken. Bird and Mumford are not offering an external profile of properties, but rather an account of what properties *are*. When Bird says that, “the identity of any property is determined by its relations to other properties,” the identity is *not* distinct from the relations. The determination talk can, *without loss of meaning*, simply be dropped; the view is that properties are identical with the relations into which they enter. As Mumford puts it, “there is nothing at all more to” a property than “its relations with other properties.”

We might express the view this way.⁴ Let R be the manifestation relation that holds between a property that is a power and the result of the manifesting or exercising of that power. The view is that every property P is identical with the set of all instances of R such that P bears R to some property or some property bears R to P. Strictly speaking, Bird would not identify properties with sets, and Mumford is agnostic about the need for, and nature of, a tie between these relations. Set talk is merely a heuristic, helping us pick out which instances of the manifestation relation the property is identical with. Let R(x₁, x₂) be an instance of the R relation and Γ, the set of all properties. Then the claim is:

$$\forall P \in \Gamma (P = \{R(x_1, x_2): x_1, x_2 \in \Gamma \wedge (P = x_1 \vee P = x_2)\})$$

While this statement *seems* immediately circular, since P appears in the specification of the set with which P is identical, it is not necessarily so. The Ramsified lawbook method avoids this sort of immediate circularity.⁵

⁴I am grateful to Alexander Bird for helpful discussion of the pure powers view.

⁵See Lewis (1970) for more detail.

Assume determinism, and let $R(P, Q)$ express a causal law. The causal lawbook is the conjunction of all such true laws. Replace the names of all the properties with variables and prefix the lawbook with a unique existence quantifier for each variable. The result is the Ramsified causal lawbook. Consider a toy world, call it TOY, with three properties, P_1 , P_2 and P_3 , such that $R(P_1, P_2)$, $R(P_2, P_3)$ and $R(P_3, P_2)$. TOY's Ramsified causal lawbook is thus: $\exists!x \exists!y \exists!z (R(x, y) \wedge R(y, z) \wedge R(z, y))$. If we drop one of the quantifiers, then we are left with an open formula. We can state the view of properties under consideration, then, as the view that each property is identical with the set of instances of R that satisfies one of the open formulae: $P_1: \exists!y \exists!z (R(x, y) \wedge R(y, z) \wedge R(z, y))$; $P_2: \exists!x \exists!z (R(x, y) \wedge R(y, z) \wedge R(z, y))$; $P_3: \exists!x \exists!y (R(x, y) \wedge R(y, z) \wedge R(z, y))$.

Having clarified the the Mumford-Bird version of the pure powers view, I now want to raise difficulties for it. Properties are, on this view, nothing more than the relations into which *they* enter. What is the referent of 'they'? What are the *relata* of these relations? There seem to be four options: 1) Substances; 2) Properties; 3) Instances of the manifestation relation itself; or 4) Nothing. I shall argue that option 2 reduces to option 3; that options 3 and 4, if any sense can be made of them, generate a wildly implausible, wholly relational view of the world; and that option 1 leaves us with a world devoid of qualities, which is disconcerting for friends of phenomenal qualia.

Consider option 1, the claim that the *relata* of the manifestation relation are substances. If that is correct, then the view is not that properties are identical with the relations into which *properties* enter, but rather that properties are identical with the relations into which *substances* enter. I will return to this view below.

Consider option 2, the claim that the *relata* of the manifestation relation are properties. This is really just a round about way of saying that the *relata* are instances of the manifestation relation itself, because properties, on the pure powers view, are identical with instances of the manifestation relation. So option 2 reduces to option 3.

Consider option 3, the claim that the *relata* of the manifestation relation are instances of the manifestation relation itself. The problem with such a view is not that we are unable to specify the relational structure or its nodes by appeal to only relations.⁶ Rather, it is that the structure we are able to specify is a *relational* structure. The view forces us to accept a wildly implausible view of the world as *entirely* relational. It forces us to

⁶Bird (2007b) argues, persuasively, that we can specify the nodes of certain relational structures by appeal to only the relations.

accept a relational version of the bundle theory of substances.⁷ On the pure powers view, for a substance to instantiate a simple property is for it to instantiate a relation. But there are only two ways to instantiate a relation. First, something instantiates a relation by being one of the *relata*. Then the view reduces to option 1, the claim that properties are identical with relations into which substances enter, a view I will consider shortly. Second, something instantiates a relation by being *an instance of* the relation. This view reduces substances to relations, but it also reduces properties to relations. It is a wholly relational view of the world. What is it for a substance to have a property? It is for a set of sets of instances of R to have as an element a set of instances of R that is related by R to some other set of instances of R that is an element of some other set of sets of instances of R. I see nothing inconsistent about such a view. I just think it's wildly implausible; there's entirely too much R going around. The world, if this view were correct, would be much too relational.

Finally, consider option 4, the claim that there are no *relata* of the manifestation relation. Notice that it's not merely that there happen to be no *relata*, which is the case for any relation that has no instances. The claim here is more substantive: there are no—and *could be no*—*relata* of the manifestation relation. I see two problems with such a view. First, it's not clear that it's a relation if it could not possibly have *relata*. Second, in what way does a substance instantiate this *relata*-less relation? If it instantiates it by being one of its *relata*, then the relation is not *relata*-less. If it instantiates it by being an instance of the relation, we are again left with a wildly implausible bundle theory of substances, according to which everything that exists is purely relational. It's relations all the way around and all the way down.

Return, then, to option 1, the claim that properties are identical with the manifestation relations into which *substances* enter. To say that I have a property, on this view, is to say that I am related in various ways to other objects. How am I related to other objects? By being disposed to cause them to be related to other objects in various ways (and by being disposed to be caused by other objects to be related in various ways to other objects). Which objects am I related to? Those that are appropriately related to other objects. This is an important and philosophically interesting theory of properties. It should appeal to many anti-neo-Humeans. Indeed, while I think it is in the end unsatisfactory, I would prefer it to any categorical account of properties.

⁷Heil (2003) argues for this conclusion as well.

Why, then, is it unsatisfactory? Because it seems to be a form of *nominalism*. It is not a pure form of nominalism, to be sure, since relations are genuine. But there are no intrinsic,⁸ monadic properties. There are no qualities, only relations. The pure powers theorist will no doubt insist that there are intrinsic properties; it's simply that what those intrinsic properties are is bundles of relations. But this is akin, I claim, to the modal counterpart theorist insisting that we really do have modal properties; it's simply that what those modal properties are is the having of a counterpart who has certain nonmodal properties. Those who think of modal properties as basic and irreducible will view the counterpart theorist's so-called modal properties as an elimination of modal properties. Similarly, there are two responses to the pure powers theory: one that sees it as an appropriate simplification of an essentialist theory of properties, and one that sees it as an *elimination* of properties.

The best way to see this divergence is to consider phenomenological properties of conscious experience. Consider, for example, the conscious experience of seeing red. There is something that it's like to be in that state or have that property, something that is accessible by introspection. The qualitative nature of such properties, or 'qualia,' forces itself upon us—or so it seems to many.⁹ The literature on qualia is vast; our current task demands that we avoid wading in. Instead, I want to focus on two of the many philosophical responses to qualia. The first response is to accept qualia as genuine, irreducible features of the world, even if they are not micro-physical or even physical properties. The second response is to deny their existence altogether—or at least analyze them into something more philosophically respectable.

Consider what an essentialist who prefers to reduce or eliminate qualia would say. She would welcome the pure powers view. In the context of

⁸Essentialists are unable to accept the common definition of intrinsic properties defended by Langton & Lewis (1998) that appeals to existing in isolation. On the pure powers theory, take away one property and you eliminate all of them, since each property depends for its identity on all other properties. Handfield (2008) makes a similar argument. Even the powerful qualities view can't straightforwardly accept the standard account. For properties, at least those of our world, appear causally interconnected. I couldn't exist in isolation, since there are too many causal requirements that involve property instances outside of myself. How, then, should an essentialist define intrinsic properties? I don't have the space to defend an account here, but it seems to me there is a surprisingly simple answer: Intrinsic properties are just the natural properties.

⁹See, for example, Jackson (1986). Note, however, that since both the pure powers theory and the powerful qualities theory are dispositional essentialist theories of properties, qualia will not be epiphenomenal as in Jackson. My quale of phenomenal red will, for example, dispose me to answer "Yes" when asked "Are you seeing something red?".

categoricalism, the rejection of qualities would leave nothing to the nature of properties at all. But since the essentialist denies categoricalism, she can reject qualities *altogether* without thereby becoming a nominalist. What is left to the being of a property is precisely the relations of manifestation.

In contrast, an essentialist who thinks of qualia as genuine, irreducible features of the world would reject the move from pure qualities to pure powers. Pure powers cannot account for the phenomenological character of experience. Whatever else can be said about qualia, about the nature of our phenomenological experiences, they are not purely relational. This essentialist will think that if the pure power view is correct, *everything* is zombie-like, disposed to act in certain ways but empty on the inside, empty of all qualitative nature. In contrast, these essentialists will want to say that properties are *both* qualitative *and* powerful. I think the arguments for mental qualia are strong, but a full defense of mental qualia would take us too far afield. Instead, I turn to consideration of a view that can accommodate qualia.

3 The powerful qualities view

While the pure powers theorist thinks of properties as *purely* powerful, the powerful qualities theorist thinks of properties as *both* qualitative *and* powerful. The challenge is to say how they could be both at the same time. In this section, I consider various statements of the view from Martin and Heil, and attempt to clarify the position.¹⁰

One way that Martin (1993) attempted to capture the dual nature of properties was to say that properties are *dual sided*. Properties are “Janus-faced” or, alternatively, each property is “a two-sided coin.” But that leads immediately to the question raised by Armstrong: How are the two sides related, contingently or necessarily? If the relation is contingent, then the qualitative side can be linked with one dispositional side in one world, but a different dispositional side (or perhaps none at all) in a different world. Essentialists would deny that possibility, so perhaps the relation should be necessary. Then the qualitative side is necessarily connected, by way of the dispositional side, with the various causal effects the property brings about. A simpler view, argues Armstrong, would “cut out the middleman” (Armstrong et al., 1996) and assert that the qualitative is directly, necessarily connected to its effects.¹¹

¹⁰I am grateful to John Heil for helpful discussion of the powerful qualities view.

¹¹Armstrong, himself, would object to such a view because of the necessary connections

Martin, however, did not intend to defend such a view. The alternative is what he calls the limit view. On this understanding of the view, no property is purely dispositional or purely qualitative. They are purely dispositional or purely qualitative “only at the limit of an unrealizable abstraction.” Thus the qualitative and the dispositional natures are “abstractly distinct but actually inseparable.” Taken to its extreme, this seems to imply that dispositionality and qualitativity are not genuine features of properties. Martin (1997) might seem to confirm this:

What is qualitative and what is dispositional for any property is less like a two-sided coin or a Janus-faced figure than it is like an ambiguous drawing. A particular drawing, remaining unitary and unchanged, may be seen and considered one way as a goblet-drawing and, differently considered, it is a two-faces-staring-at-one-another drawing. The goblet and the faces are not distinguishable parts or components or even aspects of the drawing, although we can easily consider the one without considering, or even knowing of, the other. The goblet-drawing is identical with the two-faces drawing.

It is tempting to interpret this as claiming that dispositionality and qualitativity are not real features of properties, but rather are *ways of considering* the property. The ambiguous drawing is not *in itself* a goblet drawing; neither is it a two-faces drawing. It’s just some scribbles on a paper. It is only when *we interpret it* that it becomes one or the other. Perhaps, then, we should say that properties are not, *in themselves*, dispositional or qualitative.¹²

Tempting as it is, that is not the view Martin and Heil intended to defend. Martin says that “the qualitative and dispositional are identical with one another and with the unitary intrinsic property itself.” Martin & Heil (1999) describe the view this way:

Dispositionality and qualitativity are built into each property; indeed, they *are* the property...What we propose boils down to a surprising identity: the dispositional and the qualitative are identical with one another and with the unitary intrinsic property itself.

Let’s follow Heil (2003) and call this the identity view.

between distinct existences.

¹²See Bostock (2008), p. 141, n. 2, for a version of this complaint.

The identity view clearly does not entail that the dispositionality of a property is merely a way of considering the property; otherwise it would be false that the dispositionality *just is* the property. Unfortunately, Martin’s drawing analogy invites just that interpretation. A property’s dispositionality and qualitativity “are simply different ways of representing the selfsame property. . . .” If we emphasize the analogy with the ambiguous drawing, then the following objection from Molnar (2003) seems forceful. Since there “must be some difference between a faces drawing and a goblet drawing even if one set of lines can be considered to be either or both,” it would seem to follow that the difference is *in us*, in our considering of the drawing. Thus if we take the analogy seriously, being a dispositional or qualitative property is *mind-dependent*. “Whether an object has powers and qualities depends in part on the considerings that happen. . . .”

Can Martin and Heil avoid this result without slipping back into the dual sided view? Yes, but only if they reject the ambiguous drawing analogy. They should instead compare the identity of the dispositional and the qualitative with other *a posteriori* identities. Martin & Heil (1998) do say that they are “not entirely happy with the terminology” of the ambiguous drawing analogy. What’s more, they describe the identity of the dispositional and qualitative as “surprising,” but it is not the identity of the ambiguous drawing that is surprising. Looking at the drawing and suddenly seeing that I can view it as a goblet drawing *and* a two-faces-looking-at-each-other drawing, I do not say to myself, “And here I thought I was looking at two different drawings!” What is surprising is that the very same drawing, whose identity with itself was never in doubt, can be interpreted in such different ways.

Ordinary *a posteriori* identities can be and often are surprising. That Hesperus, the evening star, is the same object as Phosphorus, the morning star, is something we can imagine might have been false. In order for the identity view to be analogous to such *a posteriori* identities, it needs to distinguish the dispositional or powerful from the qualitative in such a way that, though we can imagine that they might have been distinct, they are in fact identical. I suggest that we do so by appealing to the truthmaking relation.

4 Powerful qualities as truthmakers

I propose the following version of the powerful qualities view: To be qualitative is to be identical with a thick quiddity (a quality or quale), as discussed

below. To be powerful is to be a nature sufficient to be (part of) the *truthmaker for the counterfactuals*¹³ describing what objects with that property would do in the various circumstances they might find themselves in. (If truth bearers are necessary existents, then to be powerful is *to be* (part of) the truthmakers for such counterfactuals.) The qualitative is identical with the powerful; one and the same thing is both identical with a thick quiddity *and* a nature sufficient to be (part of) the truthmaker for the counterfactuals. Call this the truthmaker view.

Consider, first, the qualitative nature of properties. To be qualitative is to be identical with a thick quiddity, but what is a thick quiddity? The best way to understand what it is is to look at the views of someone who eventually rejected them, David Armstrong. Armstrong (1989) rejected the existence of alien properties, but originally his reason for rejecting them was that, as he put it, “each universal must surely have its own nature.” Such a nature is a thick quiddity (which in turn is nothing other than the property). Thick quiddities differ from each other, not merely numerically, but by nature. He would later describe that view in the following way: To encounter one thick quiddity is “emphatically not to have encountered them all.” Thick quiddities are the sorts of things with which “the phenomenologically minded may think... we have a direct acquaintance...” (Armstrong, 1997).

I claimed above that phenomenal properties are richly qualitative in a way that pure powers are not, and that we ought to accept mental qualia. The simplest view, therefore, would be one where *all* properties have—or, more accurately, *are*—an intrinsic qualitative character, a quality, a thick quiddity. Properties are thick quiddities.

Mental and physical properties are still different. They are qualitatively different. Their typical causes and typical effects are different. The circumstances in which they can be instantiated are different. And the nature of our access to them are different. In the mental case, our access is more direct; in the physical case, less direct. Qualia are not, in themselves, mental, and so this is not a form of panpsychism. Rather, qualia that are constituents of mental states are mental. Qualia that are not constituents of mental states are physical qualia. While mental and physical qualities are

¹³Subsequent to completion of this paper, I discovered that Bostock (2008) similarly speaks of dispositions as truthmakers for counterfactuals. The view defended here is nevertheless different, not least of which because Bostock explicitly rejects the Martin and Heil view. As far as I can see, this is because, first, he misunderstands the Martin and Heil view in precisely the above way, and, second, he (incorrectly in my view) ascribes to Martin the view that the having of a disposition entails no true counterfactuals.

different in many important ways, none of those differences entail a special ontological status for mental qualia.

That is the qualitative nature of properties. Consider, second, the powerful nature of properties. To be powerful, on this view, is to be a nature sufficient to be (part of) the truthmaker for certain counterfactuals. If the counterfactual involved were simple, invoking only one property, then that property would be sufficient to be *the* truthmaker for that counterfactual. For example, the counterfactual “were P to be instantiated, P’s instantiation would cause P not to be instantiated” needs only P as the truthmaker. But most counterfactuals involve many properties in the antecedent and consequent. All such properties, taken collectively, will be sufficient to be the truthmaker. Thus we say that one of the many properties is sufficient to be “part of” the truthmaker for that counterfactual.¹⁴

The necessity involved in the truthmaker view is simply the necessity of the truthmaking relation. Thus the manner in which it denies categoricism is clear, and properties are immediately connected to modality, causation and laws. Let property P be had by object o and be sufficient to be the truthmaker for the counterfactual, “if o were in circumstance c, then o would bring about ϕ .” Clearly this is a modal truth, since counterfactuals are modal, but it is also a causal truth. It says how o would *manifest* P, by bringing about ϕ . And, finally, the counterfactual can serve as a law: Objects with P in c would bring about ϕ .

The appeal to truthmaking, in this case, is the end of the story. The only answer to the question, ‘Why does this quality, this thick quiddity, sufficient to make true this counterfactual?’ is that the thick quiddity is the thick quiddity that it is (and not some other), and that the counterfactual is the counterfactual that it is (and not some other). Truthmaking, after all, is an internal relation. Moreover, the quiddity need not be sufficient to be the truthmaker in virtue of some ontological structure in the quiddity itself. A truthmaker is not required to be structured in the way the truth it makes true is. The truthmaker can be a unitary entity, and is in the case of the fundamental, natural properties. To be powerful is not to have some internal structure, be it relational or otherwise. Just as with Martin and Heil’s identity view, so too with the truthmaker view: That which is qualitative is identical with that which is powerful, and both are identical with the unitary property itself.

¹⁴I am grateful to Alexander Pruss for raising this issue with me in communication. I here ignore the interesting question of whether the truthmaker is a mereological sum of all the properties, simply all the properties taken together, or some other option.

Note, however, that to be powerful is *not* just to be the truthmaker for various counterfactuals.¹⁵ Truth bearers—propositions or what have you—might be contingent existents. A powerful quality would still be powerful even if the counterfactuals it *would* make true don't exist. Truthmaking is an internal relation, just as, say, *being taller than* is. If Joe is taller than Bob, but then Bob dies, Joe's height hasn't thereby changed. He simply ceased bearing the relation *is taller than* to Bob. Similarly, a powerful quality that makes some counterfactual true is no different internally if the counterfactual ceases to exist. The powerful quality's nature is still sufficient to make that counterfactual true, were it to exist. To be powerful, then, is not merely to be the truthmaker, but *to be a nature sufficient to be* the truthmaker.

I think it would be appropriate to consider the truthmaker view as a *restatement* of the identity view of Martin and Heil, in a manner that avoids common misunderstandings. There is no worry that a property's being identical with a thick quiddity is somehow dependent on our considering it; nor is it a mind-dependent matter which counterfactuals a property makes true. On both views, properties are qualitative *and* powerful, and on both views properties have a unitary intrinsic structure. The primary difference comes in the truthmaker view's appeal to the truthmaking relation to explain a property's powerful nature.

The appeal to truthmakers would be a natural fit for Martin, as he was one of the early driving forces in the demand for truthmakers. Martin himself speaks often of the need for truthmakers for robust counterfactuals. He argued, for example, for “the need of a nonregularist disposition power base as a truth-maker for strong conditionals and counterfactuals” (Martin, 1993). It is true that Martin has long argued against reductive analyses of dispositions in terms of counterfactuals (Martin, 1994), and that counterfactuals are only “clumsy and inexact linguistic gestures to dispositions” (Martin, 2008). But what is objectionable about the conditional analysis, according to Martin, is that it aims to be a *reductive* analysis, not that there are no such true counterfactuals. Consistent with that, the counterfactual conditionals I shall offer as those made true by powerful qualities will not allow for a reductive analysis. What's more, powerful qualities make an infinite number of counterfactuals true, and so any one ordinary counterfactual will indeed be only a “clumsy linguistic gesture” at the true powerful nature of powerful qualities.

¹⁵I'm grateful to Jeffrey Brower for discussion regarding this point.

5 Counterfactuals, finks and antidotes

How, then, should the counterfactuals that powerful qualities are sufficient to make true be formulated? As a first pass, we can again use the method for obtaining the Ramsified causal lawbook. Replace the names of all the properties in the causal lawbook of the actual world with variables, and prefix the lawbook with a unique existence quantifier for each variable. Drop one of the unique existence quantifiers, and the resulting open formula captures the counterfactuals.

More detail is needed. First, $R(P, Q)$ is shorthand for the counterfactual, “if P were instantiated, then that instantiation would cause Q to be instantiated,” or alternatively, “having P would cause its bearer to have Q .” Let ‘ $\square\rightarrow$ ’ be the counterfactual conditional and ‘ C ’ be the singular causal relation. Then the counterfactual can be represented as:

$$\forall x (Px \square\rightarrow C(Px, Qx))$$

(Note that this is a *would* cause counterfactual, not a *does* cause, as is appropriate for capturing the nature of a causal power.)

Clearly this represents an extraordinarily simple law. Consider, then, a slightly more complex law. Let property P_1 , when had by an object that is related by some relation R_1 to some distinct object that has property P_2 , be (at least in part) the power to cause the other object to have property P_3 . Our law, then, is, “For any x and y , if x and y were to be related by R_1 and x were to have P_1 and y were to have P_2 , then x ’s and y ’s being just so would jointly cause y to have P_3 .” More formally:

$$\forall x \forall y ((R_1(x, y) \wedge (P_1x \wedge P_2y)) \square\rightarrow (C((R_1(x, y) \wedge (P_1x \wedge P_2y)), P_3y))$$

The antecedent of the counterfactual is a complex of property instantiations, and the consequent is a singular causal relation holding between that very property instantiation complex (the would-be cause) and some other property instantiation complex (the would-be effect).¹⁶ If thus-and-so were the case, then thus-and-so would cause such-and-such.

This simple, abstract characterization will have to become much more complicated to capture most actual cases. In typical cases, there are a vast array of substances, in complicated arrangements, including spatial or

¹⁶The idea that the antecedent specifies a property complex comes from a similar idea in an unpublished paper by W. Russ Payne defending what he calls a ‘property theoretic’ semantics for counterfactuals.

temporal relations, and the effect can be in a wholly different substance. But all such counterfactuals will take the form, if thus-and-so were the case, then thus-and-so would cause such-and-such. The bomb has the power to destroy the bridge. Were the bomb at thus-and-so distance from the bridge and the bomb lit and . . . , then the bomb's being thus-and-so distance from the bridge and being lit and . . . would cause the bridge's parts to become arranged in such-and-such a manner and . . . Of course, if the bomb were at a slightly difference distance from the bridge, then things would happen in a slightly different manner, and so on. The world, it seems, is a complicated place. Even so, the abstract form of counterfactuals offered here seems capable of accommodating such complications.

While such counterfactuals come closer to to those that powerful qualities are sufficient to make true, there are two remaining complications. First, properties are sufficient to make many more than just one such counterfactual true; the number is infinite. Negatively charged particles have the power to repel other negatively charged particles in a specific way for each of the many possible distances between them, and multiplying the number of negatively charged particles involved multiplies the possibilities. For each possible, causally relevant¹⁷ property complex that some property might find itself in, it will be sufficient to be part of the truthmaker for a counterfactual that specifies what would happen were that property complex instantiated. For this reason, the view could have been called the blue print view, since the totality of counterfactuals some property is sufficient to make true serves as a sort of causal-modal blue print for the property.¹⁸ As might be clear, this fact allows for a robust metaphysics of modality that appeals only to powerful qualities, not possible worlds.¹⁹ But that last move is not required for present purposes. Here we need only suppose that of the many counterfactual truths in our world, those that involve the instantiation of natural properties are made true, at least in part, by those natural properties. If there are counterfactual truths, or any other truths for that matter, that do not involve the instantiation of natural properties, the powerful qualities view, by itself, has nothing to say about their truthmakers.

The second complication is that the counterfactuals need to be qualified. The two most common objections to connecting properties to counterfac-

¹⁷Not *every* addition of properties to some property P_1 will yield a unique, would cause counterfactual of the above form that is made true in part by P_1 . Many properties will be causally irrelevant to P_1 's instantiation.

¹⁸I got the 'blue print' name from Neil Williams, who uses it to describe a slightly different view than the one proposed here. See Williams (Forthcoming).

¹⁹See Jacobs (Forthcoming) for details.

tuals involve finks and antidotes. I think both objections fail. Finks and antidotes do not show that there are no true counterfactuals connected with powers or dispositions. They show, rather, that the true counterfactuals connected with powers or dispositions are more complicated than we might have thought.

Consider, first, the supposed problem of finks. Martin (1994) raised the problem of finkish dispositions as an objection to the conditional analysis of dispositions, but the objection might be thought to apply to any attempt to connect properties to conditionals. Finks are possible because dispositions can be gained or lost and their manifestation often takes place over a span of time. Finks cause the object to gain (or lose) the disposition or power quickly enough after the stimulus condition to allow (or prevent) the manifestation.

But for natural properties, there is no way for finks to work quickly enough.²⁰ A fink to a natural properties would have to remove the natural property itself before the manifestation could occur, since a natural properties is itself the basis for the causal powers had in virtue of that property. Suppose, for example, that the negative charge of electrons is a natural property. If a fink were to remove the basis of the power to repel negatively charged particles before the repelling occurs, it would have to remove the particle's negative charge. But, as Bird (2007a) argues, a power—in our example the particle's negative charge—does not need to persist in order for its manifestation to occur. Once it meets its stimulus condition—or, as I prefer, its manifestation partners—it's already too late for the fink to do anything. The manifestation will occur even if the negative charge is subsequently removed by a fink.

Even if that were not so, and the fink could remove the negative charge before the manifestation could occur, negative charge is still doing what it is supposed to be doing, *in those circumstances where it is finked*. Negative charge is not merely the power to repel other negatively charged particles. That is a vague gesture at its full nature. It is the power to do different, specific things in many different, specific circumstances.²¹ A finked situation is one of those many circumstances, and negative charge is the power to do something in each of those circumstances. The same holds for all properties. We pick them out by summarizing their nature, “the power to ϕ is circumstance c ,” typically by way of factors salient to us for pragmatic reasons. But their full nature involves the power to do something specific in

²⁰Handfield (2008) argues, on different grounds, that intrinsic finks never arise.

²¹In some circumstances, it will cause no changes, but even then, on certain assumptions, it plausible to suppose that it is a power to do something specific, namely, to persist.

many very specific circumstances. They do exactly what they are supposed to do, even when finked.

The same holds for antidotes. Antidotes to powers work, not by removing the power itself, but by altering the circumstances in which the power finds itself.²² An antidote to a poison need not work by changing the chemical structure of the poison; it can work by changing the way the body responds to the poison, preventing any ill effects that would otherwise occur were the poison ingested. While it seems correct to say that poison does indeed have the power to kill those who ingest it, if I were to ingest it *after taking an antidote*, it would not kill me. Let P_1 be the ingestion of poison, P_2 be death, and P_3 be the antidote to poison. The counterfactual $\forall x (P_1x \square \rightarrow C(P_1x, P_2x))$ is false, since it's possible to take the antidote before ingesting the poison.

As with finks, antidotes are no objection to there being true counterfactuals. The disposition or power is doing exactly what it is suppose to *in the context involving the antidote*. How, then, are we to complicate the counterfactuals that powerful qualities are sufficient to make true, in order to accommodate antidotes (and finks, if need be)? A notion of causal completeness is needed. The property complex specified in the antecedent must be causally complete—it must either include or rule out the various possible antidotes. In some circumstances, a poisonous chemical would kill a person who ingested it—e.g. absent an antidote. But in those circumstances where antidotes are in play, the poisonous chemical still does what it is supposed to, *in that situation*, just not by contributing to a death. It might, for example, contribute causally to a certain chemical reaction that leads to a mild stomach ache instead of death. P_1 , *in those cases where P_3 is not instantiated*, will cause P_2 . But in those situations where P_3 is instantiated, P_1 , together with P_3 , will cause something else, P_4 , or even nothing at all.

Say that a property complex PC_1 is “causal” when it would be a joint cause of some other property complex PC_2 , were it instantiated. Then a causal property complex PC_1 is “complete” when it is instantiated without any other property complex PC_4 such that were PC_1 and PC_4 coinstantiated, they would jointly bring about some $PC_3 \neq PC_2$ or nothing at all. Each counterfactual made true by a powerful quality will specify a causally complete property complex.

Return to our simple poison and antidote example. Suppose there are no other antidotes and nothing else that could possibly be causally relevant to the poison's causing death. Then P_1 (the poison) is (at least part of) the

²²See Bird (1998) for discussion.

truthmaker for two counterfactuals:

$$\begin{aligned} \forall x ((P_1x \wedge \neg P_3x) \sqsupset C(P_1x, P_2x)) \\ \forall x ((P_1x \wedge P_3x) \sqsupset C(P_1x, P_4x)) \end{aligned}$$

The simplifying assumptions can be done away with. Suppose there are many, perhaps infinitely many, antidotes to the poison. Let $\text{COM}(Pa)$ mean that a 's instantiation of P is causally complete. Then we can represent the less simple counterfactuals made true by powerful qualities in the following way:

$$\begin{aligned} \forall x ((P_1x \wedge \text{COM}(P_1x)) \sqsupset C(P_1x, P_2x)) \\ \forall x (((P_1x \wedge P_3x) \wedge \text{COM}(P_1x \wedge P_3x)) \sqsupset C((P_1x \wedge P_3x), P_4x)) \\ \dots \\ \forall x (((P_1x \wedge P_nx) \wedge \text{COM}(P_1x \wedge P_nx)) \sqsupset C((P_1x \wedge P_nx), P_mx)) \end{aligned}$$

The truthmaker view, therefore, is the claim that all natural properties are identical with a thick quiddity (a quality or quale) that is sufficient to make true some combination of counterfactuals such as those above. The end result is that properties are powers to causally contribute in particular ways to the various particular circumstances in which they might find themselves, including those situations involving antidotes.

6 Objections and replies

6.1 Trivial counterfactuals

If we took our task to be the analysis of power *concepts*, it might turn out that the connection between such power concepts and counterfactuals is trivial. Suppose we were interested in analyzing ‘the power to ϕ in c .’ Then adding the causally complete clause amounts to saying that objects with the power to ϕ in c would ϕ in c *unless they don't*. But, of course, we are not interested in an analysis of concepts, but rather a direct metaphysical connection between properties and counterfactuals. On the truthmaker view, the concept ‘the power to bring about Q ’ applies to P precisely because it is sufficient to make that counterfactual true, not the other way around. To learn that some instance of property P would bring about an instance of some other property Q , unless it were co-instantiated with some third property, is not at all trivial.

6.2 Introspection and powerful qualities

Typically it is thought by friends of irreducible qualia that our access to qualia is maximally direct in a way that our access to any other state is not, so that it simply is not possible for me to be deceived about what sort of phenomenal experience I am having. But, it might be objected, I cannot have such access to powerful qualities, even those that are mental, because I don't know the full truth about any powerful qualities merely by way of introspection. After all, I don't know by introspection the many, perhaps infinitely many, counterfactuals that my current phenomenal states make true. Hence, the objection might continue, powerful qualities cannot be qualia.

The issues here are complex; for present purposes a short response will have to suffice. The reason reductive materialism is not consistent with the claim that we have maximally direct access to the character of our phenomenal experiences is that it posits an underlying structure to those experiences that is not accessible by introspection. But powerful qualities are not structured or structural in virtue of being powerful. They are simple. As a result, the truthmaker view can accept a much stronger form of direct access than reductive materialism can, and indeed, stronger than the pure powers view can. It is possible, on the truthmaker view, for me to be directly aware of certain properties without being aware of their counterfactual profile. I can be aware of them simply because the thick quiddity with which the property is identical—the quale—is directly present to me in my experience.

When I am aware of a quale in that manner, I am not thereby aware of everything true of it, or everything that it makes true—even what is essentially true of it or what it essentially is sufficient to make true. What the truthmaker view must deny is that, in virtue of having a phenomenal experience, I know *all there is to know* about the quale I am thereby aware of. That is highly implausible anyway.

6.3 Fales' objection

According to Fales (1993), the fact that laws can be extraordinarily complex is problematic for any view that grounds the laws in the intrinsic natures of properties. We saw above that antidotes force the truthmaker view to specify some particular causal result that would be brought about for each of the possible, causally complete property complexes that a property might find itself in. As a result, the counterfactuals that a property is sufficient to make true are numerous, most likely infinite. It is this result that Fales

finds objectionable. As Fales put it, “every lawful combination of causes, and their effects, will have to follow from the natures of the related universals,” and “this complexity must somehow be built into the structure of each of the universals joined by the causal web.” According to Fales, the only way to do so is to suppose that “universals have tremendously complex natures.”

The proper response to Fales’ argument is, I think, clear. Truthmakers are not a sort of picture of the truths they make true. Nor must truthmakers have some distinct part for each distinct truth they make true. *Every* truthmaker, whether a powerful quality or not, is sufficient to make infinitely many truths true, after all. It is, therefore, incorrect to suppose that if some truth or collection of truths is incredibly complex, the truthmaker must be correspondingly complex. The complexity of laws is grounded in or made true by, but not literally *built into*, the unitary, intrinsic nature of properties.

7 Conclusion

The powerful qualities view, and in particular, the truthmaker view, is simple and fits well with our conception of ourselves, both as powerful actors in the world and as having richly qualitative experiences. I think that’s a good reason to prefer the truthmaker view, but it’s by no means conclusive. Evaluation of metaphysical theories does not work piecemeal; it proceeds by consideration of the intuitive force and theoretical power of the more systematic, general metaphysical view in which the particular theory of, say, properties, is embedded. A full evaluation of the truthmaker view of properties, therefore, would require a systematic evaluation of a general, essentialist metaphysics within which the truthmaker view is embedded.

Possibility and necessity, for example, can be reduced to counterfactuals, so that what is necessary is what would hold come what may and what is possible is what is not such that it would fail to hold come what may.²³ Powerful qualities, then, would serve as the truthmakers for counterfactuals and hence modality in general.²⁴ Causation can be conceived of as the relation that holds between a powerful quality and its manifestation.²⁵ And laws of nature can be conceived as descriptions of the nature of powerful qualities.²⁶ The resulting, essentialist metaphysic is one, I think, that is both highly intuitive and theoretically powerful. A full defense of it is an important and

²³Williamson (2007) develops this in a different context.

²⁴See Jacobs (Forthcoming).

²⁵See Mumford (2009), for example.

²⁶See Bird (2007a), for example.

worthwhile project, though not one that cannot be undertaken here.²⁷

²⁷Earlier versions of this paper were read at Indiana University, Bristol University, and Northern Illinois University. I'd like to thank the members of those audiences for helpful discussion. In addition, I worked on this paper during an NEH summer seminar, "Metaphysics and Mind," led by John Heil in 2009. I'd like to thank the NEH for its support, and the participants in the seminar for their feedback on the project. I would also like to thank Alexander Bird, Jeffrey Brower, Gabriele Contessa, John Heil, Timothy O'Connor, and Alexander Pruss for insightful discussion regarding the issues raised in the paper. Finally, I'd like to thank Ruth Groff and several anonymous reviewers for helpful comments on earlier drafts.

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